WHS 01-05

General Aviation Manufacturers Association

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Docket Management System (DMS)
U.S. Department of Transportation
Plaza Level 401
400 Seventh Street, SW.
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Subject: Docket Number FAA-2000-8017; GAMA Comments on Safe Disposition of Life-Limited Aircraft Parts

The General Aviation Manufacturers Association (GAMA) is a national trade association representing over 50 American manufacturers of fixed-wing aircraft, engines, avionics, and components. In addition, GAMA member companies also operate aircraft fleets, airport fixed-based operations, pilot and maintenance technician training facilities across the nation. GAMA submits the following comments in response to FAA's Notice of Proposed Rulemaking (NPRM 00-11) *Safe Disposition of Life-Limited Aircraft Parts*, published in the Federal Register (65FR58878) on October 2, 2000.

In general, GAMA supports the intent of the proposed rule as stated in Section 44725 of the AIR-21 (PL 106-181) legislation. However, some of the regulatory language in the affected sections are ambiguous or were not properly evaluated which may cause a broader interpretation and application than intended.

Section 43.10 Disposition of life-limited aircraft parts.
The definition statement "life-limited part means any part for which a mandatory replacement time is specified…" includes many non-critical parts. Is it the intent of this rulemaking to control the disposition of non-critical parts, such as back-up batteries (similar to watch batteries) and write-cycle limited EEPROMs, used in some electronic equipment. These kinds of parts have clear and obvious "worn out" characteristics when their life limit has been reached. The preamble to the final rule should include some discussion on this issue so as to clarify the intent of the requirement.

Since the term "life-limited part" is not unique to part 43 or maintenance operations, GAMA recommends that the definition be added to part 1. This will insure a common understanding and consistent application of the term as it is used in both aircraft certification and flight standards functions.

Section 45.14 Identification and disposition of critical components (existing language)

The current language in this section is ambiguous and may cause a broader interpretation and application for the disposition of critical components (life-limited parts) than intended. GAMA strongly recommends that section 45.14 be revised to read as follows (bold-insert, strikethrough-remove): "Each person who produces a part for which a replacement time **or removal time for inspection or overhaul** ~~inspection interval or related procedure~~ is specified in the Airworthiness Limitations section …" Furthermore, the term "critical part" should be clearly defined in part 1 for the same reasons stated above for the term "life-limited part."

The part identification marking requirements of this section are intended to apply to "critical parts." However, the current language simply states that all "parts for which a… inspection interval or related procedure is specified…" must be marked. The origin of section 45.14 (NPRM 67-44) addressed rotorcraft fatigue sensitive parts which are removed for replacement or inspection. At that time, a part with an "inspection interval" may have been considered to be critical part. However, "an inspection interval or related procedure" is specified in the manufacturer's maintenance manual or instructions for continued airworthiness for nearly all aircraft components and parts.

Under damage tolerance evaluations, which are required for part 25 aircraft primary structures and part 23 primary composite structures, very few structural parts are identified as life-limited. This is because damage tolerance evaluations at each "inspection interval" are based on fracture mechanics and flaw growth analyses. These airframe primary structures involve very large monolithic parts such as machined wing skins, composite stablilizer skins, and one piece pressure cabins. It is inappropriate and impractical to address these large integral (not removeable) parts in the same manner as parts that are routinely removed for inspection or replacement. GAMA's proposed changes would resolve these concerns.

Section 45.14 Identification and disposition of critical components (proposed language)

The proposed revision to section 45.14, "When requested by a person required to comply with 43.10 of this chapter, each person who produces a life-limited part must provide…" should be clarified so as to insure appropriate interpretation. The following issues should be addressed by revising the language or through discussion in the preamble to the final rule:

- Mixed use of the terms "critical part" and "life-limited part" will lead to confusion and inappropriate interpretation/application of the requirement. For example, the heading of section 45.14 is "Identification and disposition of critical components" whereas the proposed language refers to section 43.10 states that "each person who produces a life-limited part…"
- Does the "person who produces a life-limited part" mean the Type Certificate/PMA/TSO holder or the manufacturer/supplier of the part?
- Does this requirement to provide detailed marking instructions apply for all life-limited parts regardless of when it was or will be produced or certificated?
- What if the "person who produces (produced) a life-limited part" is no longer in existence?

January 30, 2001
GAMA WHS 01-05
Docket Number FAA-2000-8017

Paperwork Reduction Act and Economic Evaluation

New regulatory proposals or changes to existing regulations must be reviewed for compliance with the Paperwork Reduction Act and various economic analyses. These considerations were only made for the proposed section 43.10 for repair stations or those that remove life-limited parts. The proposed changes to section 45.14 and its related information requirements and expected costs to be incurred by the manufacturer (person who produces a life-limited part) who must provide detailed marking instructions. Depending on the total number of life-limited parts that must be addressed, the process necessary to meet this requirement could result in significant costs for certain manufacturers.

Manufacturer's existing information on how their production facility or suppliers mark life-limited parts (per section 45.14) are on the drawings of the affected parts. However, this information is not in a format that is readily available or even easily understood by operators or maintenance facilities. Most of these identification marks can only be applied during production or in a manufacturing facility, not in the field. Furthermore, this information only addresses part and serial numbers and does not consider how the life status could also be marked on the part. To comply with the proposed rule change, the manufacturer would need to:

- Identify every life-limited part on each and every aircraft model
- Evaluate each of these parts to determine if they can be practically marked (space availability, integrity, preservation, method, etc)
- Develop detailed marking instructions for each part
- Make the necessary changes to the maintenance manual
- Establish a customer service procedure and databank to respond to all part 43.10 information requests

GAMA recommends that the Paperwork Reduction Act and Economic Evaluation sections of the NPRM be revised to address the proposed changed to section 45.14 and those costs incurred by the manufacturer.

Effective Date

GAMA recommends that the effective date of this rulemaking be at least 180 days after the final rule is published. This will allow manufacturers enough time to complete the tasks necessary (as outlined in the previous section) to comply with the proposed changes to part 45.14.

GAMA appreciates the opportunity to review these proposed rule for the safe disposition of life-limited aircraft parts. Please feel free to contact me at wdesrosier@generalaviation.org or (202) 393-1500 or if there are any questions or comments.

Sincerely,

/s/ Walter Desrosier

Walter Desrosier

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Director, Maintenance & Engineering